80268
Z/034/60/000/06/009/053
E073/E335

A New Mechanism of Isothermal Decomposition of Alloyed Austenite

detail. There are 19 figures, 2 tables and 8 references, of which 4 are English and 4 Czech.

ASSOCIATION: VÚHŽ, Prague

SUBMITTED: February 15, 1960

Card 5/5

SKLENICKA, V.; TYKAL, K.

New metallographic apparatus at the 1964 Brno International Fair.
Hut listy 19 no.12:905-906 D '64.

L 34431-66 T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6026199 SOURCE CODE: CZ/0034/65/000/011/0796/0800

AUTHOR: Freiwillig, Rudolf--Freyvillig, R.; Cadek, Josef--Chadek, I.; Tykal, Kamil

ORG: Research Institute of Ferrous Metallurgy, Prague (Vyzkumny ustav hutnictvi zeleza)

TITLE: Recrystallization of selected grades of Czechoslovak steels. I. Recrystallization diagrams of steels CSN 17021 and CSN 17041

SOURCE: Hutnicke listy, no. 11, 1965, 796-800

TOPIC TAGS: metal recrystallization, steel, cold rolling/CSN 17021 steel, CSN 17041 steel

ABSTRACT: Recrystallization kinetics was investigated in cold rolled CSN 17021 and CSN 17041 steels on specimens with 5-8% reduction in the 650-750°C temperature range and with 30 sec.-2 hrs. annealing times. The results were plotted on thermokinetic diagrams from which the relations of the main parameters of the process annealing can readily be determined, that is, the relations of the annealing temperature and time and the degree of reduction. Suitable combination of those basic parameters makes possible the optimum technique of heat treatment for the grades considered. Orig. art. has: 6 figures and 2 tables. [Based on authors' Eng. abstract] [JPRS: 33,732]

SUB CODE: 11, 13 / SUBM DATE: none / SOV REF: 006 / OTH REF: 005

Card 1/1 UDC: 620.192.4: 669.1.017

TYKAL, P.

TECHNOLOGY

Periodical: PALVIA Vol. 38, no. 8, Aug. 1958

TYKAL, P. Measuring consumption of water. p. 281

Monthly List of East European Accession (EEAI) LC, VOL. 8, no. 3
March 1959 Unclass.

TYKAL, PRAVDOMIL.

Opravy stroju a planovani oprav. (2.vyd.)

V Praze, Czechoslovakia. Orbis a Technicky sbor URO, 1947. 83 p.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 2, Feb. 1960.

Uncl.

TYKACMYROV, V. V.

24849. TYKACMYROV, V. V. Paleogeograficheskiya Usloviya V Al'bskoye Vremya Na Malom Kavkaze. Izvestiya Akad. Nauk SSSR. Seriya Geol., 1949, 4, S. 147-59. --Bibliogr: 11 Nazv.

SO: Letopis' No. 33, 1949

TYKE, R.; SKROWACZEWSKA, Z.

Reactions of sulfanilamide with certain organic derivatives of phosphoric acid. p.51.

ROCZNIKI CHEMII. Warszawa, Poland. Vol. 33, no. 1, 1959.

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

S/185/61/006/003/004/010
D208/D302

AUTHORS: Amonenko, V.M., Kruglykh, A.A. and Tykhins'kyy, G.P.

TITLE: On the vacuum refining of chromium

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 3, 1961, 390-393

TEXT: An attempt was made to refine chromium from an aluminum admixture by the distillation method. The results were not satisfactory. The admixture contained 0.6% Al. The distillation took place in a vacuum of 10^{-6}mm Hg and at a temperature of 1400°C. It could be assumed that if the vapors precipitate on a surface which is heated to a temperature at which the difference between the vapor pressure of chromium and of aluminum is considerable, the two metals could be separated. At a condensation temperature of 900 - 1100°C there was such a difference between vapor pressures (2 orders of magnitude). Yet no appreciable refining was observed. In order to ascertain the reasons for this, alumino-thermic chromium, containing 0.6% Al and 0.2% aluminum-oxide was used, as well as melts of pure

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On the vacuum refining...

electrolythic chromium with 0.5% to 5.4% Al. The obtained specimens were distilled and condensed. In order to exclude impurities due to the oxide, the vaporization took place in crucibles made of tantalum wool. The change in aluminum contents of the precipitate as a function of temperature of the condensation surface is shown graphically. Two reasons were suggested for the inadequate results: The formation of a solid solution on condensation, and the formation of suboxides at the high vacuum-temperatures. X-ray investigations supported the first explanation. To verify the second reason, a melt Cr-Al-Al_2-O_3 with 5.4% Al and 5.7% Al_2O_3 was refined. A volatile suboxide was formed which decomposed on condensation into Al and Al_2O_3. The authors conclude that the vaporization of the aluminum admixture takes place in the atomic state. On condensation upon a hot surface (above 700°C), a solid solution is formed. During the vaporization of chromium, reactions take place in the crucible which lead to the formation of aluminum suboxides. The free Al which results from the decomposition of the suboxide forms a solid solution with the chromium. The formation of a solid solution at

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condensation temperature and the transfer of Al and Al_2O_3 as suboxides does not permit refining chromium from aluminum by the method of vacuum distillation. There are 2 figures and 7 references: 1 Soviet-bloc and 6 non-Soviet-bloc. The references to the English language publications read as follows: L. Limsden, Disc. of Far. Soc. 4, 60, 1949; A.I. Bradley, J. Inst. of Metals, 40, 319, 1937; M. Hoch, H.L. Jonston, J. Amer. Chem. Soc., 76, 2560, 1954; C. Norman Cochram, J. Amer. Chem. Soc., 77, 2190, 1955.

ASSOCIATION: Fizyko-tekhnichnyy instytut AN USSR (Physico-technical Institute AS UkrSSR, Khar'kov

SUBMITTED: July 1, 1960

23292
S/185/61/006/003/005/010
D208/D302

18 7500 1555, 1418, 1454

AUTHORS: Kruglykh, A.A., Pavlov, V.S. and Tykhins'kyy, G.P.

TITLE: Grain growth in chromium

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 3, 1961, 394-397

TEXT: The study of grain growth in chromium is of practical interest in connection with the use of chromium as a heat-resistant material. In literature there are data on the recrystallization of chromium of various degrees of purity, but there are none concerning grain growth, V.I. Arkharov, F.I. Shangarev (Ref. 1: FMM, 6, no. 1, 82, 1958); S.T.M. Johnstone (Ref. 2: Nature, 181, 806, 1957). In the present study, grain growth was investigated under isothermal annealing for the purpose of determining the rate of growth and the activation energy. Chromium was used with an admixture as specified in the table. The specimens were made of plates which were obtained by condensation, in a high vacuum (1.10^{-6} mm Hg), on a tantalum surface at 500°C. The plates were rolled at room temperature so as

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Grain growth in chromium

to thin them by 30%. Then they were annealed for 10 hours in a vacuum, at 900°C. Thus a near-equilibrium structure was obtained. The author stresses the fact that after the treatment the width of the dendrites was reduced from 50 to 30 μ (microns). After annealing at 900°C, the plates were again rolled at room temperature, and the growth was investigated (by metallographic methods) after annealing at temperatures of 900, 950, 1000, 1050 and 1100°C. The results show that the thermal fluctuations are greater at high temperatures than at low, and they lead to centers of recrystallization which are more numerous at 1100°C than at 1060°C. This explains the fact that the average size of the grains is smaller at 1100°C than at 1050°C. The linear dependence of D^2 on time shows that grain growth in chromium follows the statistical law $D^2 - D_o^2 = Kt$ (1)

where $K = K_o e^{-\frac{Q}{RT}}$ (2); D_o - diameter of grain at $t = 0$, K - rate of growth, Q - activation energy which is numerically equal or nearly equal to the activation energy of self-diffusion at the boundaries of the grains, K_o equals 1 cm^2/sec in the investigated temperature range. D_o^2 was obtained by extrapolation. The rate of

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S/185/61/006/003/005/010
D208/D302

Grain growth in chromium

growth at various temperatures was calculated by Eq (1). The temperature dependence of K in coordinates $\lg K - \frac{1}{T}$ was linear. The obtained value of the energy of activation was 53 ± 5 kcal/g.atom, which is in agreement with B.S. Bokshtein, S.T. Kishkin (Ref. 5: Zav. Lab., 23, no. 3, 316, 1957) and Gondolf Pakston (Ref. 6: Arch. Eisenhüttenwesen, 30, no. 1, 55, 1959). The equations were taken from D. Burke, U. Tarnball (Ref. 3: UFM, 1, 368, 1956) and P. Feltham, (Ref. 4: Acta.Met., 6, no. 8, 539, 1958). There are 4 figures, 1 table and 7 references: 3 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: S.T.M. Johnstone, Nature, 180, 806, 1957; P. Feltham, Acta Met., 6, No. 8, 539, 1958.

ASSOCIATION: Fizyko-tekhnichnyy instytut AN USSR (Physicotechnical Institute, AS UkrSSR) Khar'kov

SUBMITTED: July 1, 1960

Card 3/4

SHAKHURINA, Ye.A.; TYKHMANYANTS, A.A.

Spreading of gongylonemiasis among the cattle of the Uzbek S.S.R. Uzb. biol. zhur. 7 no.6:29-31 '63. (MIRA 17:6)

1. Institut zoologii i parazitologii AN UzSSR.

TYKHOMIROVA, L.I.

Health services for industrial workers in the Soviet Union.
Nepegeszsegugy 37 no.6:141-145 June 56

1. A moszkvai Voros Proletar szerszamgepgyar orvosikozgeszsegugyi reszlegenek foorvosa.
(INDUSTRIAL HYGIENE
health serv. in Russia (Hun))

L 28450-66 EWP(k)/EWP(e) LIP(c) WG/AH
ACC NR: AP6016052 SOURCE CODE: UR/0185/66/011/005/0567/0569

44
B

AUTHOR: Tykhonov, Ye. O.; Shpak, M. T.

ORG: Institute of Physics, AN UkrSSR, Kiev (Instytut fizyky AN URSR)

TITLE: Certain characteristics of ruby laser with passive Q switching

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 5, 1966, 567-569

TOPIC TAGS: ruby laser, resonator Q factor, laser modulation

ABSTRACT: The authors have experimentally determined the energy and frequency parameters of single pulses of a ruby laser with passive Q-spoiler based on a krypto-cyanine solution. The solution was kept in a cell with optically finished surfaces and placed in the resonator close to the mirror with 99.5% reflectivity (Fig. 1). To prevent generation in the secondary resonator made up by the cell and the exit mirror, the cell was inclined to the resonator axis. The ruby used was 120 mm long and 13 mm in diameter, with matte surface. The energy was measured by a calorimeter method, and the system used to record the single pulses ensured a time resolution up to 4 nsec. The output reflector was a Fabry-Perot etalon with two plane-parallel quartz plates. Its energy reflection coefficient was an oscillating function of the wavelength and its maximum value was ~55%. Such a resonator yielded a single pulse with peak power ~30 MW and width ~30 nsec. A study of the oscillograms of the single pulses for different values of initial absorption showed that a considerable decrease takes place in the duration of the generated pulse with increasing initial absorption.

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L 28450-66
ACC NR: AP6016052

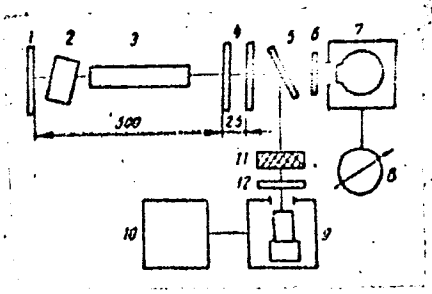

Fig. 1. Schematic diagram of setup. 1 - Mirror with multilayer dielectric coating, 2 - Q-spoiler, 3 - ruby rod, 4 - output reflector, 5 - beam splitter (glass plate), 6,12 - filters, 7 - calorimeter, 8 - mirror galvanometer, 9 - photomultiplier (FEU-22), 10 - oscilloscope (S1-11), 11 - attenuator

This result, together with data on the single-pulse energies and the peak power, are in good agreement with the theoretical calculations of A. Szabo and R. A. Stein (J. Appl. Phys. v. 36, 1562, 1965). The modulation efficiency, defined as the single-pulse energy to the laser energy in the absence of the Q-spoiler, decreases with increasing initial absorption, but this efficiency is still relatively high (33-60%). This is taken to demonstrate the advantages of Q-switching with kryptocyanine. Orig. art. has: 2 figures, 1 formula, and 1 table. [02]

SUB CODE: 20/ SUBM DATE: 04Feb65/ ORIG REF: 001/ OTH REF: 004 / ATD PRESS: 5005

Card 2/2 IC

25569
S/185/60/005/002/004/022
D274/D304

24 7100 3309, 1160, 1153

AUTHORS: Kryvoglaz, M.O. and Tykhonova, O.O.

TITLE: Theory of X-ray scattering by multi-component ordered solutions

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 5, no. 2, 1960, 158-171

TEXT: X-ray scattering by partially-ordered multicomponent solid solutions is considered; the solutions have unit cells of arbitrary type, but only the case of each atom being the center of symmetry of the crystal is considered. Formulas are derived for the intensity of diffuse scattering. Solutions with lattice of β-brass type are considered in more detail, as well as solutions in which one sublattice is occupied by similar atoms and the other sublattice contains atoms of two different types. First, the formula for the intensity of the Bragg reflection is derived. Further, the formula for the intensity of diffuse scattering is derived:

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Theory of X-ray scattering...

$$I_F = -N_o^2 \sum_{\substack{\alpha,\alpha'=1 \\ (\alpha<\alpha')}}^{n} \sum_{\gamma,\gamma=1}^{\nu} \overline{c_{q\gamma\alpha} c^*_{q\gamma'\alpha'}} \; B_{q\alpha\alpha'\gamma} B_{q\alpha\alpha'\gamma'} \qquad (9)$$

$$B_{q\alpha\alpha'\gamma} = \sum_{\gamma'} e^{2\pi i K_l h_{\gamma'}} [\bar{f}_{\gamma'} q_l, (A_{q\gamma'\gamma\alpha} - A_{q\gamma'\gamma\alpha'}) - \delta_{\gamma\gamma'}(f\alpha - f\alpha')] \qquad (10)$$

The Fourier coefficients $\overline{c_{q\gamma\alpha} \cdot c^*_{q\gamma'\alpha'}}$ can be expressed in terms of the concentration c of components at various types of lattice points and in terms of the correlation parameters. B_q is expressed in terms of the difference between atomic-scattering factors and in terms of the factor of proportionality between the q-th Fourier coefficients of concentration-fluctuations and of displacements. (q characterises the distance to the reciprocal lattice points). For a binary solution A-B, and ignoring the correlation, the formula for the intensity reduces to

$$I_F = N_o \sum_{\gamma=1}^{\nu} c_\gamma A c_\gamma B B_q^2 A B \gamma \; . \qquad (13)$$

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Theory of X-ray scattering...

The expression for the intensity becomes very simple for solutions in which the lattice points of all the sublattices, except one, are occupied by a single type of atoms. In the neighborhood of reciprocal lattice points, the intensity can be expressed in terms of the second derivative of the thermodynamic potential with respect to the concentration c. Formulas are derived by means of which B_q can be expressed in terms of the interatomic coupling constants. If the interaction between nearest neighbors only is considered, these constants can be expressed in terms of the derivative of the lattice parameters with respect to concentration, and in terms of the modulus of elasticity. In the case of certain actual crystal structures, simpler formulas were obtained; (this for hexagonal, rhombic, tetragonal, and cubic crystals by the authors in (Ref. 2: UZhF, 3, 297, 1958). In the proximity of the reciprocal lattice points which correspond to lattice, as well as superlattice reflection, the intensity of diffuse scattering varies in inverse proportion with the square of the distance from the lattice point; in that case the factor of proportionality contains the square of a structure factor which, for superlattice reflection, becomes zero

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Theory of X-ray scattering...

in case of a disordered solution. The obtained formulas permit calculating the intensity by means of independent experimental data on thermodynamic activity of components, elasticity modulus, and concentration. On solutions with crystalline lattice of β -brass type, formulas are derived (in the nearest neighbor approximation) which express the intensity of scattering at any point of the reciprocal lattice in terms of the concentration at different lattice-points and of the correlation parameters; these formulas make it possible (in several cases) to determine the correlation parameters experimentally. Using a statistical theory of ordering, the correlation parameters can be determined as functions of temperature and energy of ordering. By means of the thermodynamic theory of fluctuations, the intensity can be expressed directly in terms of energy of ordering. A formula is derived which makes it possible (in principle) to determine experimentally the energy of ordering. On solutions with two sublattices, the second sublattice having atoms of two different types, the results obtained can be used for studying vacancies in lattices of type NaCl and CsCl. A formula is obtained which permits determining (by numerical integration) the quantity

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Theory of X-ray scattering...

L which characterizes the weakening in intensity of scattering. The two sublattices have different L; in crystals of type NaCl and CsCl, L_1 exceeds L_2 by a factor of $1\frac{1}{2}$ approximately. There are 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: K. Huang, Proc. Roy. Soc., 190, 102, 1947.

ASSOCIATION: Instytut metalofizyky AN USSR (Institute of Metal-physics, AS UkrSSR)

SUBMITTED: July 11, 1959

Card 5/5

25570

24.7100 3309, 1160, 1153 S/185/60/005/002/005/022
D274/D304

AUTHORS: Kryvoglaz, M.O. and Tykhonova, O.O.

TITLE: Theory of X-ray scattering by interstitial solid solutions

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 5, no. 2, 1960, 174-188

TEXT: General formulas are derived for the intensity of diffuse scattering for both ideal and non-ideal solutions. (Ideal solutions are those with correlation parameters equal to zero). Solutions in which the interstitial atoms are in the octahedral interstices of face-centered and body-centered cubic lattices were considered in more detail, as well as martensite-type crystals. The general formulas obtained by the authors in the preceding article (of the same issue) can be also used for interstitial solid solutions, provided the interstices are considered as sublattices filled by interstitial atoms with zero scattering factor). The problem is treated from a macroscopic viewpoint, hence the intensity-distribution in the

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Theory of X-ray scattering...

neighborhood of the lattice points of the reciprocal lattice can be considered in detail irrespective of the atomic-interaction forces. Formulas are derived in the nearest-neighbor approximation, which permit determining the intensity distribution in the entire reciprocal-lattice space for any crystals to which this approximation applies. Further simplifying assumptions are made. For small q (q characterizes the distance to the reciprocal lattice points), the correlation parameters (which are frequently unknown) can be ignored, and the intensity I_F expressed in terms of the second derivative of the thermodynamic potential with respect to the concentration of the interstitial atoms; the quantity A_q (which is a proportionality factor between the q-th Fourier coefficient of atomic displacement from the lattice points and the q-th Fourier coefficient of the concentration of interstitial atoms) for hexagonal, rhombic, tetragonal and cubic crystals, can be expressed in terms of the modulus of elasticity and the derivative of the lattice parameters with respect to concentration. For an ideal solution, the intensity of diffuse scattering is $$I_F = Nf^2c\,(1 - c)(q_1, A_q)^2 \qquad (5)$$

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N is the number of interstices; c - the concentration of atoms in these interstices, f - an atomic-scattering factor of the pure metal, multiplied by a factor due to lattice defects; (q and A_q were already defined). As the interstitial atoms can be found in various types of interstices, the intensity of diffuse scattering in ideal solutions can be obtained as the sum of the terms corresponding to the various types of interstices. On interstitial solid solutions with face-centered lattices, the interstitial atoms are found in the center of the cubic lattices and in the middle of their faces, the interstices having cubic symmetry. Just as in the case of substantial solid solutions, the intensity of diffuse scattering is inversely proportional to q^2 in the neighborhood of the reciprocal lattice point. For small q, the isodiffusive surfaces are in the form of two spheres which touch at the reciprocal lattice point, (in case of elastic isotropy). For large q, the isodiffusive curves greatly differ from a bispherical shape. On martensite-type interstitial solutions, the formulas for A_q are derived. Ths isodiffusive surfaces have a shape far from spherical; this is especially the case for strongly anisotropic crystals. The intensity of diffuse scatter-

Theory of X-ray scattering...

ing in the neighborhood of the two lattice points (hOO) and (OOh) differs greatly. On interstitial solid solutions with body-centered cubic lattices, the interstitial atoms can be found with same probability in any octahedral interstice (belonging to certain types). The intensity can be found by the same formulas as for the Martensite type. The interstices have tetragonal, and not cubic symmetry. The isodiffusive surfaces do not pass through the reciprocal lattice point. As the type of isodiffusive surface varies according to the type of solid solution, the study of diffuse scattering can be used as yet another method of investigating the structure of solid solutions. Thus it can be determined whether an interstitial atom is to be found at the lattice point or in the interstice of a body-centered lattice, or whether such an atom is found in the octahedral or tetrahedral interstice of a face-centered lattice. The formulas obtained for A_q can be used not only for studying the intensity of diffuse scattering, but also for ascertaining the displacements about the interstitial atom, and for calculating the intensity reduction factor in the Bragg reflection. An example is given, where the displacements of Fe-atoms about the interstitial carbon-atom in

α-Fe are calculated. The obtained displacements are more accurate than those of J.C. Fisher, (Acta Metal., 6, 13, 1958). It is noted that the obtained distribution of defects about the interstitial atom can be used for many other problems, e.g. for determining the energy of interaction of carbon atoms in a Fe-solution, for studying the ordering of carbon-atoms in martensite, for determining the influence of interstitial atoms on the electrical conductivity of Fe, etc. The mean square displacement of atoms in the solid solutions is found from formulas given. Experimental and calculated values were compared, and it was found that though there is qualitative agreement, considerable quantitative discrepancies occur, especially for displacements alongthe x-axis. These could be narrowed by taking into account additional factors. There are 4 figures, 2 tables and 12 references: 6 Soviet-bloc and 6 non-Soviet-bloc. The references to the 4 most recent English language publications read as follows: W. Cochran, G. Kartha, Acta Cryst., 9, 944, 1956; H. Kanzaki, J. Phys. Chem. Solids, 2, 107, 1957; J.C. Fisher, Acta Metal., 6, 13, 1958; D.D. Betts, A.B. Bhatia, G.K. Horton, Phys. Rev., 104, 43, 1956.

25570
S/185/60/005/002/005/022
D274/D304

Theory of X-ray scattering...

ASSOCIATION: Instytut metalofizyky AN USSR (Institute of Metal-physics AS UkrSSR)

SUBMITTED: July 2, 1959

Card 6/6

L 44021-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6028715 (N) SOURCE CODE: UR/0185/66/011/008/0922/0923

AUTHOR: Papirov, I. I.; Smyrnov, Yu. M.; Tykhyns'kyy, H. P.; Finkel', V. O. 35 B

ORG: Physicotechnical Institute, AN URSR, Kharkiv (Fizyko-tekhnichnyy instytut AN URSR)

TITLE: Solubility of cerium in beryllium 21

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 8, 1966, 922-923

TOPIC TAGS: ~~beryllium cerium alloy, beryllium cerium solid solution~~, SOLUBILITY, LATTICE PARAMETER, BERYLLIUM ALLOY, CERIUM CONTAINING ALLOY

ABSTRACT: An attempt has been made to determine the solubility of cerium in beryllium by measuring the lattice parameters of a beryllium alloy containing 0.35% cerium over

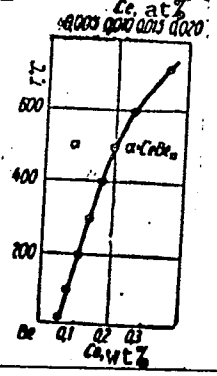

Fig. 1. Solubility of cerium in beryllium versus temperature

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L 42821-66

ACC NR: AP6028715

a wide range of temperatures from 1200C to the temperature of liquid nitrogen. The obtained data indicated that at 720C, the solubility of cerium was 0.35% and drops continuously with decreasing temperatures to about 0.06% at room temperature (see Fig. 1). Little or no change occurs with further decreases of temperature to that of liquid nitrogen. Orig. art. has: 3 figures. [AZ]

SUB CODE: 11/ SUBM DATE: 30Mar66/ ORIG REF: 003/ OTH REF: 005/ATD PRESS: 5166

Card 2/2

L 47292-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/HW

ACC NR: AP6030733 (A,N) SOURCE CODE: UR/0021/66/000/008/1015/1017

21
B

AUTHOR: Tykhonovych, V. I. --Tikhonovich, V. I.; Markovs'kyy, Ye. A. -- Markovskiy, Ye. A.; Fedorchenko, I. M. (Academician AN UkrRSR)

ORG: Institute of Foundry Problems, AN URSR (Instytut problem lyttya AN URSR)

TITLE: Hysteresis of antifriction properties of materials under conditions of boundary friction in heating and cooling

SOURCE: AN UkrRSR. Dopovidi, no. 8, 1966, 1015-1017

TOPIC TAGS: hysteresis, antifriction property, boundary friction

ABSTRACT: The author shows that external heating followed by subsequent cooling produces hysteresis in the antifriction properties of materials in friction. This is explained by the fact that for a period of time the contacting surfaces retain the physicomechanical properties which are true for higher temperatures. This is due to phase transformations in the structure of the metal at the surface of contact. The article was presented by Academician I. M. Fedorchenko of the AN UkrRSR. Orig. art. has 2 figures. [Based on authors' abstract] [SP]

SUB CODE: 11 SUBM DATE: 26Nov65/ ORIG REF: 003/

Card 1/1 Bearing Materials 18

AGEYEVA, A.; TYKLIN, A.

Analysis of narrowing differences in the wages of high and low salaried workers in the electric machinery industry. Biul. nauch. inform.: trud i zar. plata 4 no.12:30-39 '61. (MIRA 15:1)
(Wages--Electric machinery industries)

TYKLIN, A. (Moskva)

Paying bonuses to engineers and technicians in the electric equipment industry. Sots. trud 7 no.9:62-65 My '62. (MIRA 15:5)
(Wages--Electric equipment industry)
(Bonus system)

TYKLIN, A.A., inzh.

Competition between the collectives of electric equipment plants.
Vest. elektroprom. 31 no.11:78-80 N '60. (MIRA 13:12)
(Electric industries--Employees)

SOV/110-59-6-11/24

AUTHORS: Sokolov, A.Z., Engineer and Tyklin, A.A.

TITLE: The Rationalisation of Wages in the Electrical Manufacturing Industry (Nekotoryye voprosy uporyadocheniya zarabotnoy platy v elektrotekhnicheskoy promyshlennosti)

PERIODICAL: Vestnik elektropromyshlennosti, 1959, Nr 6, pp 48-51 (USSR)

ABSTRACT: The rationalisation and technical rating of wages can have an important influence on labour productivity. The tariff system and correct organisation of labour rating play an important part in the organisation and regulation of wages. The main components of the tariff system are: the tariff grading; the top grade tariff rating and the tariff-qualification table. In the electrical industry there are now about three hundred different tariff gradings, of which about two hundred are sub-divided into eight grades. Such complications are quite unjustified. In particular, of the eight grades only five are in general use. Analysis of data from a number of electrical engineering works shows that at the present time the tariff constitutes only some 35 to 50% of the workers' wages. Often it is not advisable to use

Card 1/5

The Rationalisation of Wages in the Electrical Manufacturing Industry

the piece-work system but sometimes the low tariff rates have led to the use of piece-work in cases where it is difficult or even impossible to assess the amount actually earned. Experience with a reorganised tariff system in fourteen engineering works since 1956 has shown that it is possible to transfer groups of workers, particularly in auxiliary shops, to a time and time-premium system of wage payments. Examples of this are given. The proportion of rationally-formulated job ratings is very small. Usually the tariff-qualification tables are based on the so-called "summary" method in which the work is evaluated as a whole on the basis of experience. This method may be valid in some simple cases but in general it is not. There is no uniformity in classifying the difficulty of work and the same job is often assessed differently in different places. The Scientific Research Institute of Labour has proposed a theoretical method of determining the difficulty of work. The method is based on a points system of

 evaluating work functions and the constituent parts of

The Rationalisation of Wages in the Electrical Manufacturing Industry

the labour process. The Institute sub-divides any working process into four functions: calculation, including calculations made before and during the working process; preparatory work, including selection of tools, equipment etc; the actual working process; and control of equipment which makes additional demands on the qualified worker. A factor is also used to allow for the responsibility of the work. Some of the defects of the procedure of the Institute of Labour are then discussed. In drawing up the rates for fitting and assembly, the Scientific Research Institute of the Electro-Technical Industry somewhat revised the procedure of the Institute of Labour: the two points systems are compared in a Table. On the 3rd November 1958, the Council of Ministers of the USSR and the All-Union Council of Trade Unions published a decree "Transfer to a shorter working day and reorganisation of wages in the engineering, oil and gas industries". It recognised

The Rationalisation of Wages in the Electrical Manufacturing Industry

particularly that in reorganising wage rates the wages of the lower paid workers should be increased to reduce the difference between the maximum and minimum earnings. The new conditions of wage payment are to involve appreciably higher tariff rates. Technical and other staff wages are also to be rationalised. When shortening the working day and applying the new justified time-rates one should raise considerably the productivity of labour. About three quarters of all wage payments should be on the tariff scale. In going over to the 7-hour working day and reorganising wages, every undertaking of the electrical industry should ensure that labour productivity increases more rapidly than wages. The transfer to the shorter working day should mainly be based on economies achieved by avoiding excesses in the system of wage payment, by introducing improved production methods, cutting out losses of working time and regularising the rating of

The Rationalisation of Wages in the Electrical Manufacturing Industry

work and improving control of production. There is 1 table.

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TYKLIN, D., inzh.

Tool room of a construction site. Energ. stroi. no.33:86-87 '63. (MIRA 17:8)

TYKLIN, D.A., inzh.

New pipe-cutting machine tools. Mont. i spets. rab. v stroi. 24 no.8:17-19 Ag '62. (MIRA 15:8)

1. Gosudarstvennyy soyuznyy montazhnyy trest Glavpromenergomontazha Ministerstva stroitel'stva elektrostantsiy SSSR.
(Pipe cutting)

TYKLINA, I.G.; IL'INA, L.I.

Clinical aspects and pathological anatomy of congenital toxoplasmosis.
Zhur. nevr. i psikh. 60 no.3:319-326 '60. (MIRA 14:5)

1. Psikhonevrologicheskaya gorodskaya klinicheskaya bol'nitsa No.4 imeni P.B.Gannushkina (glavnyy vrach V.N.Rybalka), Moskva.
(TOXOPLASMOSIS)

TYLKIN, M.A.

Conditions of heat treatment for Kh9C2 heat-resistant steel. Izv. vys.ucheb.zav.; chern.met. 4 no.5:173-176 '61. (MIRA 14:6)

1. Dneprodzerzhinskiy metallurgicheskiy institut.
(Steel, Heat resistant--Heat treatment)

TYKOCHINSKAYA, E.D., doktor meditsinskikh nauk, prof.

Motor and visceral reflexes in physiology and in the clinic. Vop. kur., fizioter. i lech. fiz. kul't. 26 no.3:272-273 My-Je '61. (MIRA 14:7)

(REFLEXES)

TYKOCHINSKAYA, Esfir' Davydovna, prof.; BERKENBLIT, Z.M., red.; SHEVCHENKO, F.Ya., tekhn.red.

[Acupuncture and cauterization] Igloukalyvanie i prizhiganie. Leningrad, Gos.izd-vo med.lit-ry Medgiz, Leningr.otd-nie, 1960. 53 p. (MIRA 14:1)
(ACUPUNCTURE)

TYKOCHINSKAYA, E.D.; DOMOGAROVA, O.V.; DORFMAN, V.Ye.

Role and place of physical therapy in the treatment of nervous and mental diseases. Trudy Gos. nauch.-issl. psikhonevr. inst. no.20:55-62 '59. (MIRA 14:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy psikhonevrologicheskiy institut imeni V.M. Bekhtereva, Leningrad.
(NERVOUS SYSTEM--DISEASES) (PHYSICAL THERAPY)

TYKOCHINSKAYA, E.D.

Acupuncture in diseases of the peripheral nervous system. Trudy Gos. nauch.-issl. psikhonevr. inst. no.24:173-179 '61. (MIRA 15:5)

1. Laboratoriya igloterapii Gosudarstvennogo nauchno-issledovatel'skogo psikhonevrologicheskogo instituta imeni Bekhtereva.
(NERVOUS SYSTEM, SYMPATHETIC—DISEASES) (ACUPUNCTURE)

TYKOCHINSKAYA, E.D.

Acupuncture as a method in reflex therapy. Vop.psikh.i nevr. no.7:249-260 '61. (MIRA 15:8)

1. Iz laboratorii igloterapii nauchno-issledovatel'skogo psikhonevrologicheskogo instituta imeni V.M.Bekhtereva (dir. chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR prof. V.N. Myasishchev).

(ACUPUNCTURE)

TYKOCHINSKAYA, E. D.

TYKOCHINSKAYA, E.D.

Effect of climatic factors on the peculiarity of the distribution of iodine introduced into the body. Report No.1. Vop.kur., fizioter. i lech.fiz.kul't. 22 no.3:13-16 My-Je '57. (MIRA 11:1)

1. Iz Instituta fizicheskikh metodov lecheniya imeni I.M.Sechenova (Yalta)

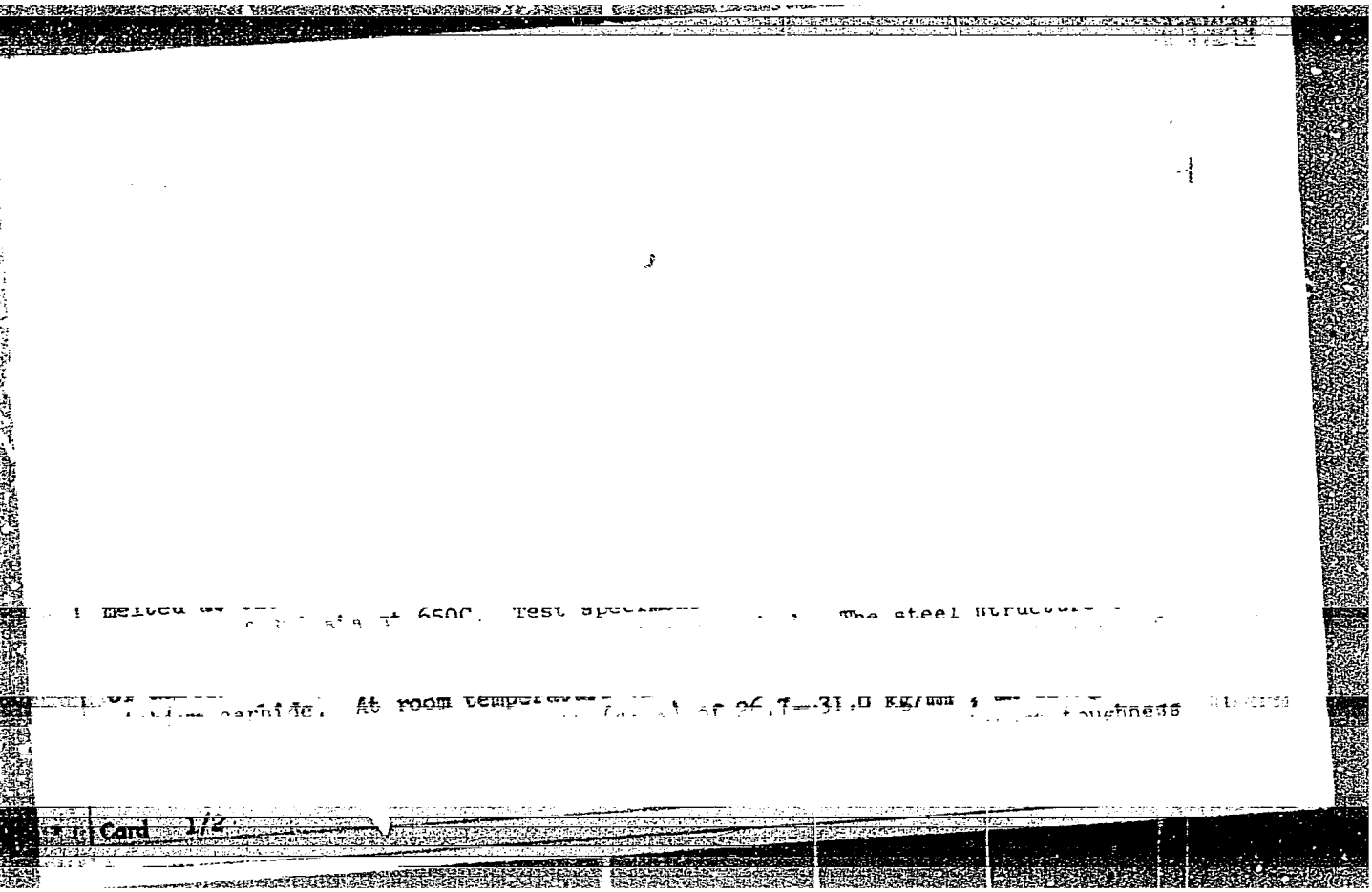
(CLIMATOLOGY, MEDICAL) (IODINE--ISOTOPES)
(ELECTROPHORESIS)

TYKOCHINSKAYA, E. D.

"Classification, Clinical Characteristic and Ultrahigh-Frequency Therapy of Obliterating Endarteritis." Sub 9 Feb 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55



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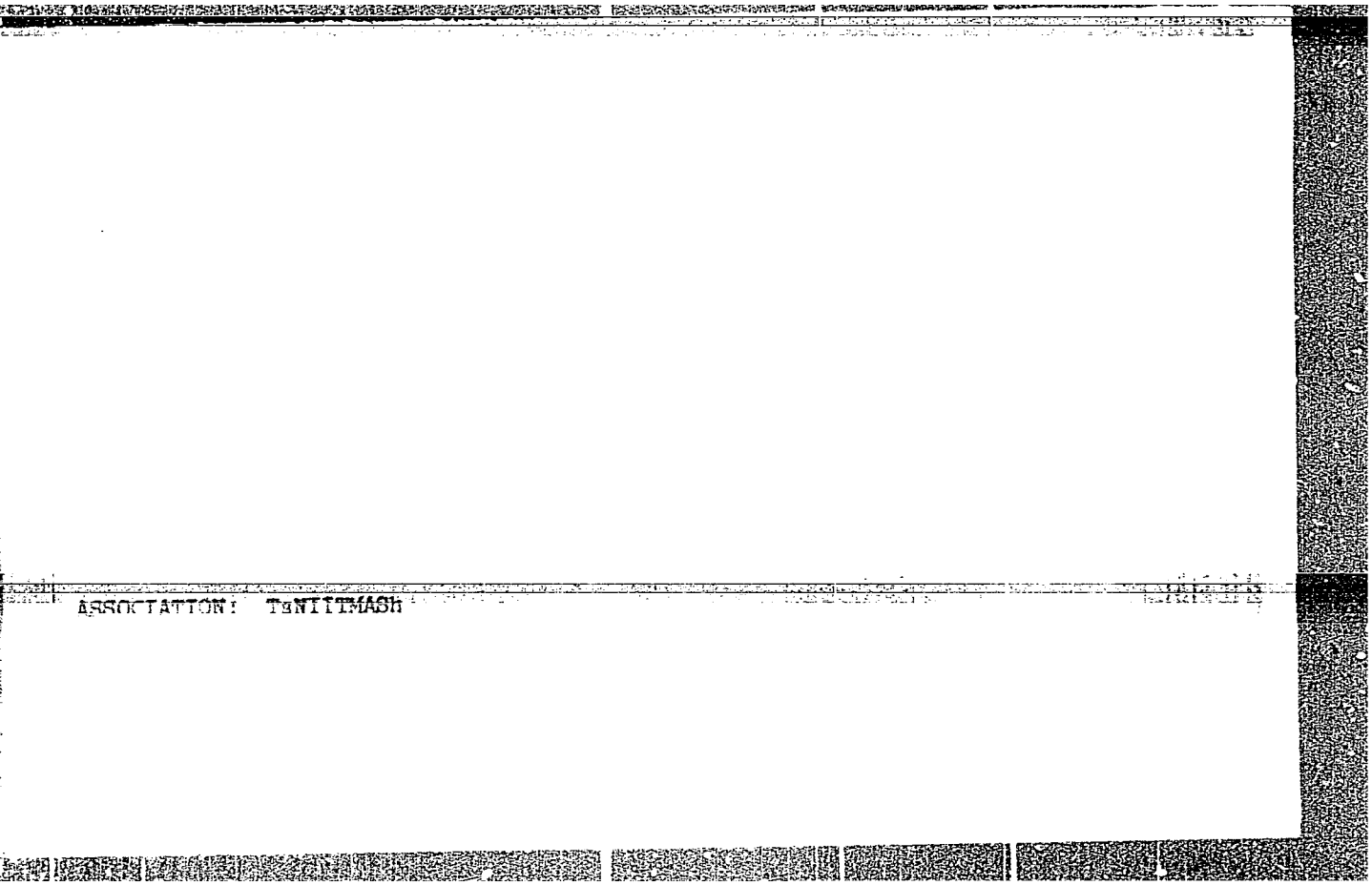

FANTAYEVA, M.I., kand. tekhn. nauk; TYKOCHINSKAYA, T.V., inzh.

Study of the properties of the metal of industrial pipes from EP-17 steel. Teploenergetika 12 no.3:28-31 Mr '65.
(MIRA 18:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya.

NOVIKOV, I.I.; ZOLOTOREVSKIY, V.S.; TYKOCHINSKIY, D.S.

Investigating the plasticity of intermetallic compounds during flexure and tension. Fiz. met. i metalloved. 15 no.6:813-818 Je '63. (MIRA 16:7)

1. Moskovskiy institut stali i splavov.
(Intermetallic compounds—Testing)
(Plasticity)

S/282/63/000/003/004/006
A052/A126

AUTHOR: Tykoniewicz, Jan

TITLE: A head for manufacturing shaped products of plastics

PERIODICAL: Referativnyy zhurnal. Otdel'nyy vypusk. 47. Khimicheskoye i [illegible], Abstract [illegible], 1961)

TEXT: The shaping heads in use have a complicated design and can be used for manufacturing certain products only. The proposed head can be used for manufacturing products of various shapes by means of exchangeable shaping inserts. The casing of the head consists of two cylinders 2 and 8 (see Fig.). Inside the casing there is a cylinder 7 fastened to the casing with four screws 5. To the cylinder 7 by means of four bolts 11 a rod 3 is fastened; it has the form of a cylinder with five or more holes. Inside the cylinder 2 the exchangeable insert 4 is located. In the place of connection of the head to the feeding mechanism there is a sieve 10 in the form of a metal plate with holes. On the cylinder 8 of the casing an electric heating device 9

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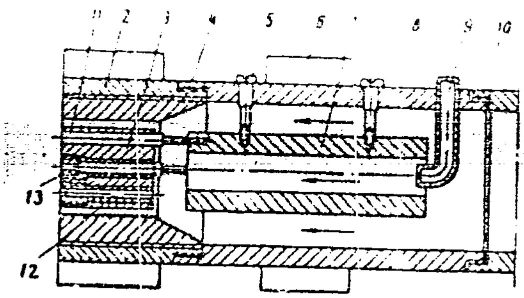
with an automatic temperature contr[illegible]ller is mounted and on the cylinder 2 the water jacket for cooling the cyl[illegible] [illegible] insert, depending on the thickness [illegible] its walls, [illegible] the thickness [illegible] produced films and [illegible] [illegible] [illegible] [illegible] which the shaping [illegible] [illegible] the product: the insert 12 is used for forming threads and the insert 13 for forming two-core cables. Another [illegible] is used for manufacturing tubes. After the head has been [illegible] [illegible] mechanism the [illegible] materi-al passes through the sieve 10, [illegible] [illegible] and also between the cylinders 7 and 8 in the direction of insert 4. When coating with plastics wires, cables, bands, etc., they are supplied to the shaping head through the tube 9 and drawn through the cylinder 7 and the shaping insert 13. There are 9 figures.

Yu. Zayas

[Abstracter's note: Complete translation.]

A head for manufacturing shaped products of ... S/232/63/000/003/004/006
A052/A126

Figure:



Card 3/3

AUTHOR: Novikov, I. I.; Goloborodskiy, ...; Rytkovskiy, D. S.

TITLE: Investigation of ductility of intermetallic compounds under bend and tension

SOURCE: Fizika metallov i metallovedeniye, v. 15, no. 6, 1963, 813-818

TOPIC TAGS: intermetallic-compound ductility, intermetallic-compound room-temperature ductility, intermetallic-compound elevated-temperature ductility, aluminum-magnesium compound, copper-aluminum compound, antimony-tin compound, copper-tin compound, magnesium-zinc compound, aluminum-copper-magnesium compound, aluminum-magnesium-copper compound, superductility

ABSTRACT: The effect of temperature on the ductility of intermetallic compounds found in commercial aluminum-, copper-, and magnesium-base alloys has been investigated. Compounds (see Table 1 of Enclosure) were prepared from high-purity [illegible] Al, Cu, Mg, Zn, Sb, [illegible] and tested in bend and tensile tests in the as-cast and, in some cases, the annealed condition. At room temperature [illegible] with the exception of [illegible] -phase, Al_2Mg_3, was [illegible] with a reduction in area close to 100% and an elongation of 30%. The Al_2Mg_3,

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[illegible] and Al_2CuMg compounds and two-phase compounds [illegible] and [illegible] become ductile at temperatures above [illegible] T_m, where T_m is melting temperature. The rise of ductility occurs within a very narrow temperature range, e.g. [illegible] °C for Al_4M_2. Annealing in most cases did not improve ductility and in some cases even reduced it. Only in the case of Al_2CuMg did annealing have a beneficial effect. The ductility of some compounds, e.g., Cu_3Sn, sharply decreases also in the temperature range of polymorphic transformation. Orig. art. has: 1 table and 6 figures.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 06Jun62 DATE ACQ: 23Jul63 ENCL: 01

SUB CODE: ML NO REF SOV: 016 OTHER: 004

Card 2/2

DUBASOV, B.M., otv. red.; TYKOTSKIY, L.I., red.; PRETER, I.Kh., tekhn. red.

[The national economy of the Lithuanian S.S.R. in 1960; brief statistical handbook] Narodnoe khoziaistvo Litovskoi SSR v 1960.godu; kratkii statisticheskii sbornik. Vil'nius, Gosstatizdat, Litovskoe otd-nie, 1962. 192 p. (MIRA 15:7)

1. Lithuanian S.S.R.Statistikos valdyba. 2. Nachal'nik TSentran'nogo statisticheskogo upravleniya Litovskoy SSR (for Dubasov).

(Lithuania—Statistics)

DUBASOV, B.M., otv. red.; TYKOTSKIY, L.I., red.; PRETER, I.Kh., tekhn. red.

[National economy of the Lithuanian S.S.R. in 1961; statistical abstract] Narodnoe khoziaistvo Litovskoi SSR v 1961 godu; statisticheskii sbornik. Vil'nius, Gosstatizdat, Litovskoe otd-nie, 1963. 227 p. (MIRA 16:12)

1. Lithuanian S.S.R. Centrine statistikos valdyba. 2. Nachal'nik TSentral'nogo statisticheskogo upravleniya Litovskoy SSR (for Dubasov).

(Lithuania--Statistics)

TYKOTSKIY, M.Ye. (Khabarovsk)

Installation of radiators with horizontal sections. Vod. i san. tekh. no.11:14 N '61. (MIRA 15:6)

(Radiators)

ZOTIKOV, Vladimir Yevgen'yevich, doktor tekhn. nauk, prof.; BUDNIKOV, Ivan Vasil'yevich; TYKOV, Petr Pavlovich; GORDEYEV, Vasiliy Aleksandrovich; DALIDOVICH, Aleksandr Semenovich; CHUGREYEVA, V.N., red.; BATYREVA, G.G., tekhn. red.

[Equipment and technology for the processing of fibrous materials] Mekhanicheskaia tekhnologiia voloknistykh materialov. Moskva, Gislegprom, 1963. 638 p. (MIRA 16:9)
(Textile industry) (Textile machinery)

TYKTIN, N.V.

Resistance of potatoes to the potato root eelworm (Heterodera rostochiensis W.). Dokl. akad. sel'khoz. 23 no.9:24-28 '58. (MIRA 11:10)

1.Vsesoyuznyy institut rasteniyevodstva. Predstavlena akademikom S.M. Bukasovym.
(Potatoes--Disease and pest resistance)

TYKTIN, N. V. Cand Biol Sci -- (diss) "Choice of the starting material for the selection of nematode-resistant potatoes (Heterodera rostochiensis Woll.)" Len 1958. 19 pp (All-Union Order of Lenin Acad Agr Sci im V. I. Lenin. All-Union Inst of Plant Cultivation), 100 copies (KL, 14-58, 112)

TYKTIN, N.V.

Resistance of potatoes to the potato root eelworm (Heterodera rostochiensis W.). Dokl. akad. sel'khoz. 23 no.9:24-28 '58
(MIRA 11:10)

1.Vsesoyuznyy institut rasteniyevodstva. Predstavlena akademikom S.M. Bukasovym.
(Potatoes--Disease and pest resistance)

TYKTIN, N.V.

Method for detecting the degree of soil infection by the potato nematode. Zashch. rast. ot vred. i bol. 4 no.5:43 S-O '59. (MIRA 16:1)

1. Zaveduyushchiy laboratoriyey Minskoy opytnoy stantsii.
(Soils—Analysis) (Nematoda)

TYKVA, J., inz.

Physical properties of construction materials at low temperatures. Strojirenstvi 14 no.11:Suppl.:Tabulky pro konstruktery no.4:1-2 N '64.

1. State Research Institute of Material and Technology, Prague.

Tykva, J.

18

Sendust, an antiremanent alloy. J. Tykva and P. Plzák. *Strojírenství* 8, 778-8(1958).—Phys. and technol. properties

3

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APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757710019-3"

Z/506/60/000/000/002/004
I037/I237

AUTHORS: Vodsed'álek, Josef , Engineer, Vystyd, Miloš, Engineer, Tykva, Jaroslav, Engineer, Vása Šicho, Miroslav (Čestmír) and

TITLE: Materials for gas turbine blades

SOURCE: Prague. Statni vyzkumny ustav materialu a technologie. Materialovy sbornik, 1959. Prague, 1960, 57-114

TEXT: Modern gas turbine blades reach temperatures of up to 1000°C. Great interest is given to cast blades. The properties of blades cast from the alloy Poldi AKNC (80 Ni - 20 Cr admixtures of Ti, Al) were compared with the forged alloy. Alloys having different admixtures of Ti and Al (1-3%) and smaller quantities of Mn, Si with traces of C, P, S, were investigated by measuring: creeping strength, relaxation, fatigue, damping, thermal expansion, electric conductivity, Young's modulus and thermal shock resistance.
For creeping strength tests, sticks were preheated for annealing in air for up to 16 hrs at temperatures between 700°C - 1080°C in case I and 700°C - 1200°C in case II. At 750°C in case I a strength

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I037/I237

Materials for gas...

limit of 15 kg/mm^2 for 1000 h. and in case II a limit of 19 kg/mm^2 for 1000 h were achieved. At stresses greater than 15 kg/mm^2, the alloy Poldi AKNC is inferior to the English alloy Nimonic 80A. At lower stresses (longer time or higher temperatures) the two alloys are equivalent. Heat treatment (case II) applied gradually considerably improved Poldi AKNC. The creep properties of castings are also very good but results vary more than for the forged alloy. Fatigue can be tested by several methods: (bending at rotation, alternate bending, stress - compression test) with different results. The normally treated alloy has a somewhat higher limit of fatigue at alternate stress and at smaller prestress, whereas the specially heat treated alloy is superior at higher prestress. The fatigue properties of normally treated Poldi AKNC are similar to those of Nimonic 80 A. There is a relation between grain size and limit of fatigue. From here follows the low fatigue limit for castings. The internal damping in Poldi AKNC is relatively small. It is dependent on temperature and prestressing.

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Materials for gas...

Heat shock resistance was checked in SVÚMT instrument in which wedge shaped samples were repeatedly heated (up to 800°C in 3 min.) and cooled (at a rate of 200°C/sec). The cracks formed in this process were then plotted as a function of the number of cycles (repetitions). The forged AKNC is superior in this respect to the cast alloy. Relaxation measurements show that Poldi AKNC does not tend to plastic deformation. Electrical and thermal conductivity as a function of temperature were measured (the first is nearly constant, the second increases linearly with the temperature). The model of elasticity is considerably higher in the forged than in the cast material. Some methods of hardening of the alloy are given and photographs showing the surface structure are presented. There are 70 figures, 16 tables and 31 references. The English references include: Betteridge W., Franklin, A.W. J. of Inst. Metals, 85, 473 (1956-7). Taylor, A. J. of Metals 8, 1356 (1956). McLean, D. J. Inst. Metals 85, 481 (1956-57).

Card 3/3

Z/009/60/000/01/008/038
E073/E235

AUTHORS: Khol, F., and Tykva, J.

TITLE: Simple Modification of a High Speed Photometer for Recording Photometric Lines

PERIODICAL: Chemický průmysl, 1960, Nr 1, p 24

ABSTRACT: Numerous Czech Research Institutes and Works use a Zeiss high speed photometer or a Soviet type MF 2 high speed photometer for evaluating spectrum and X-ray exposures in structural analysis. Work with these instruments is relatively difficult and laborious. Although automatic recording microphotometers are now being produced in Czechoslovakia, the authors think it of interest to draw the attention of readers to the possibility of modifying ordinary microphotometers to operate as recording instruments. The recording of the spectrum can be carried out by means of simple equipment which was used for evaluating X-ray exposures, although the recording is not in terms of absolute values of blackening; the modification is described in some detail. Even if the equipment does not have the same performance as a microphotometer recording absolute

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Z/009/60/000/01/008/038
E073/E235

Simple Modification of a High Speed Photometer for Recording Photometric Lines

values, it proved useful and enabled speeding up of the evaluation of exposures and, in addition, enabled the obtaining of a permanent record on paper. There are 3 figures.

ASSOCIATION: Státní výzkumný ústav materiálu a technologie, Praha (State Research Institute in Materials and Technology, Prague)

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G/016/60/008/004/005/005
B022/B070

AUTHORS: Tykva, Jaroslav, Engineer, and Khol, Frantisek, Doctor (Prague)

TITLE: Apparatus for the Integral Motion of a Sample in the X-Ray Microanalysis of a Material

PERIODICAL: Experimentelle Technik der Physik, 1960, Vol. 8, No. 4, pp. 187-191

TEXT: In the X-ray study of the fine structure of crystalline substances, those photographs can be easily evaluated for which the single crystals have diameters from 10^{-5} to 10^{-3} cm, because these substances give continuous interference lines. This is not possible for bigger crystals since the photometric measurements of the blackening of films in this case lead to strong fluctuations. Similar difficulties also arise in the study of non-homogeneous substances. It is necessary in such cases to take a large number of photographs at different points of the sample and take a statistical average. In both these cases, it is necessary for a quantitative evaluation to move the sample uniformly during the experiment so that

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Apparatus for the Integral Motion of a Sample in the X-Ray Microanalysis of a Material

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B022/B070

all points of the material come under the primary ray one after another, and an average value over the whole surface may be taken. The author describes a method meeting all these requirements. It is better than the method of obtaining continuous lines either by rotating the film or the X-ray, none of which lead to an average over the whole surface. The apparatus permits such a motion of the sample that the primary ray makes a meandering trace all over the surface such as is shown in Fig. 1. The motion is produced by two conical cam disks arising from two Archimedean spirals. The cam disks are so constructed that the lifting can be continuously changed from 10 to 20 mm. The form of the cam disks is shown in Fig. 2. Fig. 3 shows a photograph of the apparatus which makes the above-described motion of the sample possible. The apparatus is secured to an arm by which it can be rotated, and so the angle of incidence of the ray on the sample can be regulated. The distance of the film from the point of intersection of the incident ray with the surface of the sample does not change during the experiment. Fig. 4 gives the arrangement for securing the apparatus to an X-ray microinstrument. Fig. 6 shows some of the photographs taken with the apparatus described. There are 6 figures.

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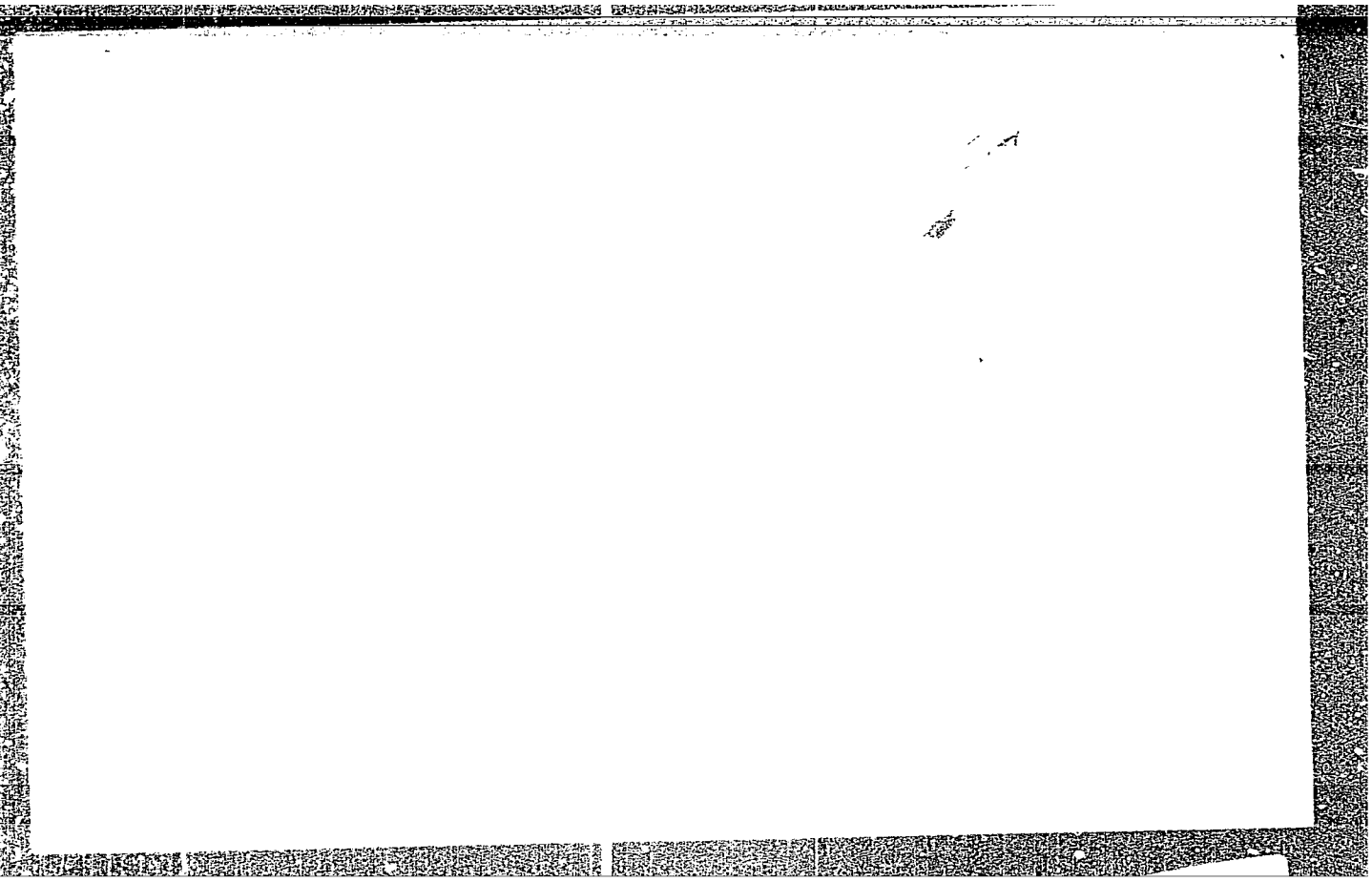
Apparatus for the Integral Motion of a Sample in the X-Ray Microanalysis of a Material

G/016/60/008/004/005/005
B022/B070

ASSOCIATION: Staatliches Forschungsinstitut für Material und Technologie, Prag (State Research Institute for Material and Technology, Prague)

SUBMITTED: January 8, 1960

Card 3/3



APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757710019-3"

S/137/62/000/006/121/163
A052/A101

AUTHORS: Vodšed'álek, Josef, Vystyd, Miloš, Tykva, Jaroslav, Váša, Čestmír, Sicho, Miroslav

TITLE: Materials for gas turbine blades

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1962, 56, abstract 6I330 ("Materiál. sb. SVUMT. 1959". Praha, 1960, 57 - 114, Czechoslovakian; Russian, English and German summaries)

TEXT: The high-temperature alloy of Poldi AKNTs grade was investigated in a cast and forged state. Besides long-life strength of the material, relaxation, fatigue and damping, thermal expansion, heat conductivity, E and thermal impact resistance of the material were determined. An investigation of the alloy in a forged state has shown that the values of mechanical and heat-resistance properties are in accordance with the literature data for nimonic-80A alloy. However, by means of a special heat treatment it was possible to achieve higher characteristics. The alloy is sensitive to stress concentrations on account of its low ductility at rupture. In a cast state the heat-resistance properties are good,

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Materials for gas turbine blades

however there is a larger spread of results. σ_w of the material in a cast state is lower than that of the material in a forged state.

T. Rumyantseva

[Abstracter's note: Complete translation]

Card 2/2

TYKVA, J., inz.

National seminar on electric furnaces in machine industry forgery.
Strojirenstvi 13 no.8:631-632 Ag '63.

ACCESSION NR: AP4020562 Z/0032/64/014/003/0237/0237

AUTHOR: Tykva, J.

TITLE: State of stability of phases in alloys Ni - Cr, and Ni - Cr - Ti

SOURCE: Strojirenstvi, v. 14, no. 3, 1964, 237

TOPIC TAGS: Ni-Cr alloys, electric resistance, low temperature properties, Ni-Cr-Ti alloys, crystallization phase

ABSTRACT: Anomaly of the behavior of alloys of the type Ni - Cr is discussed. The use of electrical resistance to indicate conditions that cannot be followed by an optical or an electron microscope is described. In the alloy Ni - Cr - 6 Ti information concerning mainly low temperature crystallization phases is given. The article is an abstract of report Z-63-1265 of SVUMT, Prague. Orig. art. has no graphics.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 31Mar64 ENCL: 00

SUB CODE: ML NO REF SOV: 000 OTHER: 000

Card 1/1

TYKVA, J., inz.

Survey of some physical properties of several Czechoslovak stainless and fire-resisting steels. Strojirenstvi 13 no.8:Suppl.: Tabulky pro konstruktery Vol.13 no.8:I/13-I/14 Ag '63.

1. Statni vyzkumny ustav materialu a technologie, Praha.

TYKVA, Jaroslav, inz.; JEZEK, Jaroslav, RNDr.

Magnetic separation of electrolytically isolated phases. Hut listy 16 no.1:53-56 Ja '61.

1. Statni vyzkumny ustav materialu a technologie, Praha.

JEZEK, J., RNDr., Sc.C.; TYKVA, J., inz.

Effect of structural changes upon coercive force of ferromagnetic materials. Strojirenstvi 11 no.12:915-920 D '61.

1. Statni vyzkumny ustav materialu a technologie, Praha.

TYKVA, J., inz.

Review of main physical properties of some construction steels used for heat engineering installations. Strojirenstvi:Suppl.: Tables for designers 13 no.7:I/1-I/4 Jl '63.

1. Statni vyzkumny ustav materialu a technologie, Praha.

19

Methods of measurement of the carbon-14 radioactivity. Richard Tykva and Dezider Grünberger (Ceskoslov. akad., ~~věd, Prague~~). *Chem. Listy* 53, 979–95(1959).—Methods based on the detection of ionization in gases and methods based on scintillation are reviewed. 188 references.
Jiří Himl

TYKVA, P.; BEZKARAVAYNYY, A.

Manufacture of prestressed concrete elements. Prom.stroi. i inzh. soor. 4 no.4:49-53 Jl-Ag '62. (MIRA 15:9)
(Prestressed concrete)

TYKVA, P., inzh.; BEZKARAVAYNYY, O., inzh.

Manufacture of prestressed wire-reinforced concrete trusses in one piece with a span of 30 m. Bud. mat. i konstr. 4 no.2: 6-14 Mr-Ap '62. (MIRA 15:9)
(Trusses) (Prestressed concrete)

TYKVA, Richard; GRUNBERGER, Desider

Automatic continuous measurement of radioactivity ^{14}C in the fractions from chromatographic columns. Chem listy 59 no.6: 732-737 Je '65.

1. Institute of Organic Chemistry and Biochemistry of the Czechoslovak Academy of Sciences, Prague. Submitted July 14, 1964.

CZECHOSLOVAKIA

TYKVA, R; PANEK, V

Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague - (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 12, December 1966, pp 4724-4728

"Preparation of infinitely thin layers using water soluble organic substances labelled by tritium."

TYKVA, R.

The measurement of $^{14}CO_2$ activity inside Geiger-Muller counting tubes. Coll Cz Chem 25 no.7:1874-1882 Jl '60. (EEAI 10:9)

1. Isotope Laboratory, Institute of Chemistry, Czechoslovak Academy of Science, Prague.

(Carbon dioxide) (Geiger-Muller counters)

TYKVA, R.

Measurement of the ^{14}C radioactivity of organic substances insoluble in a scintillator by means of liquid scintillation or inside gas counters. Coll Cz Chem 29 no. 3:680-689 Mr '64.

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Source: Prague, Collection of Czechoslovak Chemical Communications, Vol 26, No 10, October 1961, pp 2463-2472

Data: "Rapid Assay of Tritium-Labelled Substances Inside GM Gas Counting Tubes."

TYKVA, R.

"Tritium marking. Preparation, measurement and use of ^{3}H-marked compounds according to Wilzbach" by M. Wenzel, P.E. Schulze. Reviewed by R. Tykva. Chem listy 57 no.3:281 Mr '63.

TYKVA, R.

"Tritium marking. Preparation, measurement and use of ^{3}H-marked compounds according to Wilzbach" by M. Wenzel, P.E. Schulze. Reviewed by R. Tykva. Chem listy 57 no.3:28[illegible] Mr '63.

TYKVA, R

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Academic Degrees: [not given]

Affiliation:

Source: Prague, Collection of Czechoslovak Chemical Communications, Vol 26, No 10, October 1961, pp 2511-2518

Data: "Determination of the Products of the Oxidation of Methylcyclohexane with the Oxide of Hexavalent Chromium."

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TYKVA, R, Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences (Institut fuer organische Chemie und Biochemie), Prague

TYKVA, Richard

Shielding of measuring devices for low activities of soft radiators. Jaderna energie 8 no.3:82-85 Mr '62.

1. Ustav organicke chemie a biochemie, Ceskoslovenska akademie ved, Praha.

TYKVA, R.

Rapid assay of tritium-labelled substances inside Geiger-Muller gas counting tubes. Coll Cz Chem 26 no.10:2463-2472 O '61.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague.

KOURIM, P.; TYKVA, R.

Determining the products of methylcyclohexane oxidation with chromium (VI) oxide. Coll Cz Chem 26 no.10:2511-2518 O '61.

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